(b) (6)

RE: Wilcox Oil Company Superfund Site – Residential Data Results

Dear (b) (6) :

This letter provides you with a summary of the soil data results for your property. Based on our review of the data, soil samples collected from your property did not exceed levels considered acceptable by EPA for short-term exposures. Although some concentrations exceeded their Residential Screening Level (RSL) for soil, this is merely an indication that further evaluation may be needed. The concentrations that exceeded the RSL are expected to fall within the accepted range established by EPA for long term exposures.

Table 1 presents the results for those chemicals detected in the soil and exceeding the RSL. All other data concentrations fell below the RSL. One metal and several organic chemicals were detected as levels that exceed the Residential Soil Screening Levels (RSL). Arsenic was detected in every sample with the highest result being 5.7 milligrams per kilogram (mg/kg) at a depth of 12 - 24 inches below ground surface (bgs). Published reports have documented the background range of arsenic concentrations for Oklahoma as being 0.6 to 21 mg/kg. The highest result of 5.7 mg/kg falls within the range of background concentrations. Several Polycyclic Aromatic Hydrocarbons were detected as presented below. In addition to these chemicals, oil-saturated soils were visually identified within sample Grid 4 at a depth of 12 inches and within sample Grid 6 at a depth of 18 inches.

Table 1

Grid	Depth	Chemical	Concentration mg/kg	Screening Level mg/kg
Grid 1	0 – 2 inches bgs	Benzo(a)pyrene	0.026	0.016
	2 – 6 inches bgs	Benzo(a)pyrene	0.11	0.016
		Benzo(b)fluoranthene	0.19	0.16
		Dibenzo(a,h)anthracene	0.024	0.016
Grid 2	0 – 2 inches bgs	Benzo(a)pyrene	0.063	0.016
		Dibenzo(a,h)anthracene	0.017	0.016
	2 – 6 inches bgs	Benzo(a)pyrene	0.017	0.016
Grid 3	0 – 2 inches bgs	Benzo(a)anthracene	0.19	0.16
		Benzo(a)pyrene	0.17	0.016
		Benzo(b)fluoranthene	0.27	0.16
		Dibenzo(a,h)anthracene	0.04	0.016
		Indeno(1,2,3-cd)pyrene	0.17	0.16

Table 1				
Grid	**Depth**	**Chemical**	**Concentration mg/kg**	**Screening Level mg/kg**
Grid 3	2 – 6 inches bgs	Benzo(a)pyrene	0.12	0.016
		Benzo(b)fluoranthene	0.19	0.16
		Dibenzo(a,h)anthracene	0.03	0.016
	12 – 24 inches bgs Duplicate	Benzo(a)pyrene	0.023	0.016
Grid 4	0 – 2 inches bgs	Benzo(a)pyrene	0.059	0.016
		Dibenzo(a,h)anthracene	0.016	0.016
	0 – 2 inches bgs Duplicate	Benzo(a)pyrene	0.043	0.016
	2 – 6 inches bgs	Benzo(a)pyrene	0.11	0.016
		Benzo(b)fluoranthene	0.18	0.16
		Dibenzo(a,h)anthracene	0.025	0.016
	6 – 12 inches bgs	Benzo(a)anthracene	0.23	0.16
		Benzo(a)pyrene	0.2	0.016
		Benzo(b)fluoranthene	0.31	0.16
		Dibenzo(a,h)anthracene	0.051	0.016
		Indeno(1,2,3-cd)pyrene	0.22	0.16
	12 – 24 inches bgs	Benzo(a)anthracene	0.18	0.16
		Benzo(a)pyrene	0.16	0.016
		Benzo(b)fluoranthene	0.24	0.16
		Dibenzo(a,h)anthracene	0.039	0.016
		Indeno(1,2,3-cd)pyrene	0.18	0.16
Grid 5	0 – 2 inches bgs	Benzo(a)anthracene	0.37	0.16
		Benzo(a)pyrene	0.21	0.016
		Benzo(b)fluoranthene	0.2	0.16
		Dibenzo(a,h)anthracene	0.067	0.016
	2 – 6 inches bgs	Benzo(a)anthracene	2.1	0.16
		Benzo(a)pyrene	1.2	0.016
		Benzo(b)fluoranthene	0.95	0.16
		Dibenzo(a,h)anthracene	0.44	0.016
		Indeno(1,2,3-cd)pyrene	0.62	0.16
	6 – 12 inches bgs	Benzo(a)anthracene	0.31	0.16
		Benzo(a)pyrene	0.15	0.016
		Dibenzo(a,h)anthracene	0.062	0.016
Grid 6	0 – 2 inches bgs	Benzo(a)pyrene	0.023	0.016
	2 – 6 inches bgs	Benzo(a)pyrene	0.03	0.016
	6 – 12 inches bgs	Benzo(a)pyrene	0.055	0.016
	6 – 12 inches bgs Duplicate	Benzo(a)anthracene	0.25	0.16
		Benzo(a)pyrene	0.17	0.016
		Benzo(b)fluoranthene	0.28	0.16
		Indeno(1,2,3-cd)pyrene	0.17	0.16
	12 – 24 inches bgs	Benzo(a)pyrene	0.095	0.016

Table 1				
Grid	**Depth**	**Chemical**	**Concentration mg/kg**	**Screening Level mg/kg**
Grid 7	0 – 2 inches bgs	Benzo(a)anthracene	0.74	0.16
		Benzo(a)pyrene	0.32	0.016
		Benzo(b)fluoranthene	0.24	0.16
		Dibenzo(a,h)anthracene	0.11	0.016
	2 – 6 inches bgs	Benzo(a)anthracene	0.32	0.16
		Benzo(a)pyrene	0.16	0.016
		Dibenzo(a,h)anthracene	0.055	0.016
Grid 8	0 – 2 inches bgs	Benzo(a)pyrene	0.02	0.016

The Residential Soil Screening Levels represent conservative levels developed using risk assessment guidance from the EPA Superfund program. RSLs are considered by the Agency to be protective for humans (including sensitive groups) over a lifetime of exposure. RSLs are not cleanup standards and are used for site "screening" to help identify areas, contaminants, and conditions that may require further investigation at a particular site. Generally, at sites where contaminant concentrations fall below RSLs, no further action or study is warranted under the Superfund program, so long as the exposure assumptions at a site match those used to develop the RSL. Chemical concentrations above the RSL do not automatically trigger a response action; however, exceeding the RSL suggests that further evaluation of the potential risks by site contaminants is appropriate. In addition, further evaluation of the potential risks related to site contaminants that were detected in the soil but have no RSL is appropriate. As we move forward with our site investigation, we will be evaluating these contaminants in more detail through a Site-specific Human Health Risk Assessment to determine the potential risks these contaminants may pose. For additional information related to Arsenic and Polycyclic Aromatic Hydrocarbons, please see the enclosed contaminant profiles developed by the Agency for Toxic Substances and Disease Registry (ATSDR).

If you are concerned, please consider some of these options while we evaluate these contaminants in more detail.

- Ensure proper hygiene, especially frequent hand washing.
- Use gloves to limit direct contact with soils.
- Soil should be thoroughly shaken off clothes and footwear, before entering homes.
- Use a dust mast when mowing.
- Limit outside digging and soil moving activities.

We would like to follow-up with you during the week of October 26, 2015, to discuss the data presented in this letter and answer any questions that you may have. We will contact you by phone to schedule a time that fits your schedule. In the interim, should you want to talk with us, please contact me at 214-665-8143, or 1-800-533-3508, or contact Todd Downham, Oklahoma Department of Environmental Quality at 405-702-5136.

Sincerely,

Katrina Higgins-Coltrain,
Remedial Project Manager
LA/OK/NM Section